

MIT's
Oldest and Largest
Newspaper



WEATHER, p. 2
TUE: 59°F | 43°F
Sunny
WED: 54°F | 40°F
Showers
THU: 62°F | 42°F
Mostly sunny

Anna Tang to go to trial this month

Currently under house arrest

John A. Hawkinson
NEWS EDITOR

Anna Tang, the former Wellesley student accused of stabbing Wolfe B. Styke '10 while he slept in his Next House room in October 2007, will go to trial later this month.

Commonwealth v. Anna Tang will have a jury trial in Middlesex Superior Court on the morning of Monday, May 24.

Tang has remained under house arrest since early 2008, permitted to leave only to attend church, with her location monitored by a GPS ankle bracelet that communicates with her cell phone.

Tang inadvertently violated her parole on Saturday, October 10, 2009, when she left home for church but forgot to take her cell phone, triggering a response from the Framingham police, who arrested her. She was released from jail back

to house arrest five days later.

Tang had been under considerable stress; according to a motion filed with the court in on July 21, her father, Jay Tang, has been diagnosed with terminal liver cancer, and was leaving for China on July 27, "perhaps never to return."

The court approved a change in Anna Tang's house arrest so she could live with another family member, since she would no longer be able to live with her father.

Pre-trial activity in the case has been sporadic. Throughout 2008, the docket consisted mostly of discovery motions and the like, but in December 2008, both sides asked to postpone the trial in a joint motion, because Tang "will be relying on a defense of lack of criminal responsibility and/or diminished capacity," and the defense required

Tang, Page 12

Student groups wait for checks

Delay is due to volume of requests, admin says

John A. Hawkinson
NEWS EDITOR

The Student Activities Finance Office, which is responsible for processing reimbursements and checks for student groups, is running several weeks behind schedule.

SAFO normally commits to processing reimbursement and check requests within a few days, but it has difficulty meeting these goals.

Jed W. Wartman, associate dean for student activities, said that normally, students should receive checks four to five days

after submission: one day for auditing; about one day to input the information into SAFO computers; one or two days to receive the check; and then up to a day to file the check and notify the student.

Wartman acknowledged that the processing delay is a problem that recurs at the end of every term and "is directly linked to the volume of requests."

He could not provide specific information on delays but was able to provide statistics on the volume of requests by month.

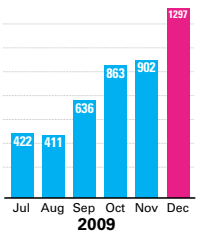
"On our busiest end of semester days we see

nearly 400 vouchers in one day," he said, roughly eight times the average for November.

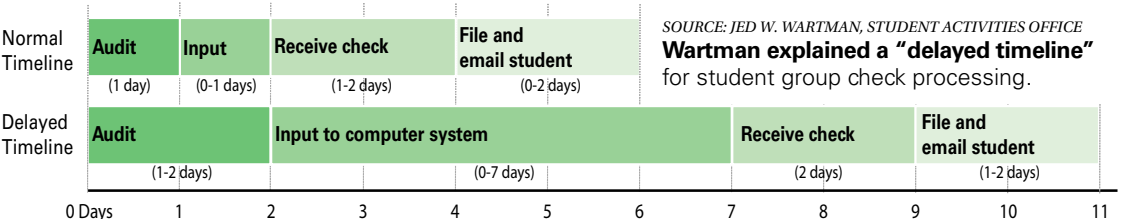
With the additional load, Wartman said, the time to audit and input vouchers has risen from one or two days to as long as seven.

Anecdotally, students have reported much longer delays, extending to several weeks. Wartman said he could not confirm these delays.

Wartman said that additional staff are allocated to processing this paperwork at this time of year and that SAFO is "constantly exploring new and more efficient methods for processing checks."



SOURCE: JED W. WARTMAN
Reimbursement and direct-to-vendor checks processed by SAFO from July to December 2009. Volume spikes at the end of term.



SOURCE: JED W. WARTMAN, STUDENT ACTIVITIES OFFICE
Wartman explained a "delayed timeline" for student group check processing.

Physics concert charges up 54-100

Professors and students alike jam for community concert

By Jessica J. Pourian
ASSOCIATE NEWS EDITOR

"There are going to be real musicians here tonight!" declared physics professor Christoph M.E. Paus — harnessing the energy in the room.

"Not those with the leisure to drown in bath tubs in Paris," added Peter Fisher, physics professor, referencing the dramatic death of Jim Morrison, the lead singer of the Doors.

The two professors, dressed in black suits and ties, introduced themselves as Professors K and J, or the "Professors in black" Sunday night they co-hosted the Physics Rock Concert held in 54-100. About 60 people attended. The audience included mostly students, but some faculty and performers' families also came.

Why would a bunch of physics pro-



ADITI VERMA—THE TECH

Physics Professor Peter H. Fisher and Associate Professor Christoph M. E. Paus, emcees for the Physics Rock Concert in 54-100 on Sunday, attempt to wipe the audience's memory at the end of the night. The Physics Rock Concert, organized by the Society of Physics Students, was attended by about 60 Course 8 students, faculty, and friends.

Physics rock, Page 8

\$100K finalists dine at Metcalfe's Boston home

By Ana Lyons
NEWS EDITOR

For the past some 15 years, Robert Metcalfe '68, co-inventor of Ethernet and founder of the digital electronics manufacturer 3Com, has invited finalists in MIT's iconic \$100K entrepreneurship competition into his historic Boston home — settled quaintly in the Back Bay among rows of picturesque brownstones — for his traditional dinner with the competition's remaining team members.

The event, he said, is meant to promote friendly networking among teams, celebrate the success they have achieved so far, and provide a chance from him to offer his own humor-ridden advice to students before the last round of competition begins.

This year was no exception.

"You're all winners for getting this far," he told the crowd of finalists, standing several steps up his entry-way stairs.

"Just remember, often times the team that gets first place isn't always the one that goes out into the world and is the most successful," he said, commencing this year's round of cocktails, hors d'oeuvres, dinner, and dessert.

"I want to get them all together while they all are still winners," he later told *The Tech*.

After graduating from MIT in 1969 with dual degrees in Course VI (Electrical Engineering & Computer Science) and Course 15 (Management), Metcalfe began his career in electrical engineering, co-inventing Ethernet while

\$100K, Page 16

IN SHORT

Blood drive on campus
MIT's American Red Cross is conducting a blood drive today through Friday in the La Sala de Puerto Rico room on the second floor of the student center. Times can be found at <http://web.mit.edu/blood-drive/www/>.

Time magazine named Amy Smith '84 to their top 100 'most influential

people' for her work on international development and founding D-Lab. She currently is senior lecturer in the Department of Mechanical Engineering.

Last day of classes this Thursday! Good luck on final exams, and have a great summer.

Send news information and tips to news@tech.mit.edu.

FROM THE EDITORS

Freshman class size target remains at 1070

Friday's rank one article paraphrased Senior Associate Dean for Residential Life Karen Nilsson as saying the class of 2014 "might" have around 1,300 students, over 200 more than the class of 2013.

That information was incorrect.

The Tech should have questioned that fact more strongly and verified it against other sources before reporting it.

The formal correction runs on p. 4 of this issue.



IN MEMORY OF

Joshua Jahnke

Joshua Jahnke, a lieutenant in the U.S. Navy who recently completed graduate studies in the Department of Mechanical Engineering (MechE), died on April 28 at his home in Hudson, Mass., after a courageous 22-month battle with pancreatic cancer. He was 29.

Jahnke, Page 8

TECH SUMMER SCHEDULE STARTS
This is the last regular issue for the 2009–2010 school year. *The Tech* will next publish on June 4 for Commencement.

EDITORIAL
House Dining Advisory Group minutes are too vague to correct the group's lack of transparency.
OPN, p. 4

CYMBALS EAT GUITARS
An interview with the most indie-named band of 2009. **ARTS p. 10**

CLASS OF 2014 COMMITS TO MIT
About 64 percent of admitted students chose to come to MIT. **NEWS, p. 13**



STARS & EXPLOSIONS
Iron Man 2 is packed with stars and explosions, but its plot does not match the original *Iron Man's* stellar quality. **ARTS, p. 10**

SECTIONS
World & Nation . . . 2
Opinion 4
Fun Pages 6
Arts 10
Sports 18

Finland’s 100,000-year plan to banish its nuclear waste

By **Dennis Overbye**
THE NEW YORK TIMES

It is, in the words of the Danish filmmaker Michael Madsen, “a place we must remember to forget.”

On a wooded island more than a hundred miles northwest of Helsinki, in the town of Eurajoki, Finnish engineers are digging a tunnel. When it is done 10 years from now, it will cork-screw three miles in and 1,600 feet down into crystalline gneiss bedrock that has been the foundation of Finland for 1.8 billion years.

And there, in a darkness that is still being created, the used fuel rods from Finland’s nuclear reactors — full of radioactive elements from the periodic table as dreamed up by Lord Voldemort, spitting neutrons and gamma rays — are to be sealed away forever, or at least 100,000 years.

The place is called Onkalo (Finnish for “hidden”) and it is the subject of “Into Eternity,” a new documentary by Madsen.

Watching it during the recent Tribeca Film Festival brought me into a more visceral contact with the

vicissitudes of geologic time than I might have really wanted. These days I find that I can barely envision the future more than about six months ahead — hardly enough time even to plan for a proper summer vacation. My images of the deep future have always been vaguely utopian, like “Star Trek,” but “Star Trek” takes place only a few hundred years into the future, not 100,000 years.

Onkalo, on the other hand, is supposed to last 20 times as long as the pyramids have so far — so long that the builders of the site have to take into account the next ice age, when the weight of two miles of ice on top of Finland will be added to the stress on the buried waste containers, copper canisters two inches thick.

It might seem crazy, if not criminal, to obligate 3,000 future generations of humans to take care of our poisonous waste just so that we can continue running our electric toothbrushes. But it’s already too late to wave off the nuclear age, and Madsen’s film comes at a perfect time to join a worldwide conversation about what to do with its ashes. On June 3, administrative law judges from the

Nuclear Regulatory Commission will begin hearing arguments about whether the Department of Energy can proceed with shutting down development of the Yucca Mountain site in Nevada, where the United States had been planning since 1987 to store its own nuclear waste.

If the Obama administration prevails, the United States will be back to square one in figuring out how to get rid of its own 77,000 radioactive tons, including 53 million gallons left over from the dawn of the nuclear age sitting in leaky tanks in the Washington desert near the Columbia River. There are somewhere between 250,000 and 300,000 tons of high-level radioactive waste already in the world, much of it in pools on the sites of nuclear power plants where the rods have to cool for years before they can be put into containers.

Onkalo is being built to do its job without human intervention or maintenance. Once it is done and sealed back up a hundred years or so from now, the problem is less with keeping all the radioactivity in than keeping people out.

Post-mortem of Wall St. plunge puts focus on computer trading

By **Graham Bowley**
THE NEW YORK TIMES

Investigators seeking an explanation for last week’s brief stock market panic said Sunday that they were focusing increasingly on how a broad decline of blue-chip stocks might have set off an uncontrolled response from new high-speed trading networks.

These networks went haywire after they detected that trading in an unusually large number of stocks had been slowed down by the New York Stock Exchange because they had already begun to fall sharply, according to an official familiar with the investigation.

That could mean that the computers first flooded the market with sell orders that could not be matched with buyers. Then, just as quickly, many of these networks withdrew from trading. The combined effect might have set off a chain reaction that sent shares of many companies spiraling during the 15-minute frenzy.

After a weekend of analysis, many specialists at the major exchanges no longer believe that a single large sell trade in one stock, like that of Procter & Gamble, was the trigger. Instead, they suspect that a mismatch in

rules between the older NYSE and younger electronic exchanges set off a frightening sequence of events.

Ever since computerized trading became a major force in the nation’s stock markets over the past four or five years, experts have been warning that the lack of consistent rules among exchanges and the increasing complexity and speed of computer systems could destabilize markets. This appeared to happen last Thursday, when the stock market dropped in 20 terrifying minutes by 1,000 points.

The SEC and the heads of four of the main exchanges are due to meet in Washington on Monday to discuss why regulators had failed to act to close the widely flagged weakness in the system, and propose ways to fill it.

In particular, they are looking at why rules on the NYSE forced trading in hundreds of individual stocks to stop at around 2:40 p.m. near the height of the sell-off last Thursday but allowed trading in the same stocks to continue unabated on other electronic exchanges.

As regulators and exchanges continued to feverishly study trading records over the weekend, they began to build a clearer picture of what might have been the original

trigger of the sell-off. They are now focusing on a big downward movement in a futures contract on the Chicago Mercantile Exchange which triggered broad selling in a number of individual stocks on several stock exchanges and did not involve one single large sell order on any one stock.

Investigators say the rule on halting trading was designed for a time when the NYSE accounted for the vast proportion of stock trading. But over the past half decade the Big Board’s share of the market has shrunk dramatically — caused, in part, by regulatory changes to encourage new competitors — while ever larger volumes of stocks are traded on electronic venues without such circuit breaker rules.

Investigators are now focusing on the dynamics of what happened last Thursday when “many hundred of stocks” on the NYSE, including five major stocks that make up the Dow Jones industrial average, including Accenture, Procter & Gamble, and 3M went into so-called Liquidity Replenishment Points.

This decision forced trading to switch to slow-motion manual trading as traders on the floor of the stock exchange tried to arrest the decline by manually seeking out bidders.

Tories gain but fail to take majority, hung Parliament

LONDON — After one of the most passionately contested elections in decades, Britain faced the stalemate of a hung Parliament on Friday, with no party likely to command an outright majority despite significant gains by the opposition Conservatives and damaging losses for Prime Minister Gordon Brown.

But as the country braced for days of wrangling to form a new government, Brown signaled that he would not immediately step down, even though his party lost its majority, shedding at least 88 seats in the House of Commons while the opposition Conservatives surged ahead with a 94-seat gain.

“The election results are likely to show there is no clear majority for any single party,” Brown said in a statement. In effect, the results brought an abrupt and messy end to 13 years of Labour’s majority.

“As I said last night, it is my duty as prime minister to take all steps to ensure Britain has a strong, stable and principled government,” Brown said.

The Conservatives, led by David Cameron, were set to win the largest number of seats but not an outright majority. Labour, seeking a fourth term, lagged in second place while the third party, the left-of-center Liberal Democrats, failed to make the gains forecast before Thursday’s vote.

The outcome plunged the political elite into frantic calculations to devise an alliance that could produce a parliamentary majority, but the results offered no easy computations. Barring a last-minute swing, the only obvious arrangement yielding a majority would come from an alliance of Conservatives and Liberal Democrats — but they have profound ideological differences.

—*John F. Burns and Alan Cowell, The New York Times*

Dow’s rapid fall of 1,000 points rattles traders and investors

A bad day in the stock market turned into one of the most terrifying moments in Wall Street history on Thursday with a brief, 1,000-point plunge that recalled the panic of 2008.

It lasted just 16 minutes but left Wall Street experts and ordinary investors alike struggling to come to grips with what had happened — and fearful of where the markets might go from here.

At least part of the sell-off appeared to be linked to trader error, perhaps an incorrect order routed through one of the nation’s exchanges. Many of those trades may be reversed so investors do not lose money on questionable transactions.

But the speed and scale of the plunge — it was the largest intraday decline on record — seemed to feed fears that the financial troubles gripping Europe were at last reaching across the Atlantic. Amid the rout, new signs of stress emerged in the credit markets. European banks seemed to be growing wary of lending to each other, suggesting the debt crisis was entering a more dangerous phase.

Traders and Washington policy makers struggled to keep up as the Dow Jones industrial average fell 1,000 points shortly after 2:30 p.m. and then mostly rebounded in a matter of minutes.

The day’s uncertainty pushed the euro to its lowest level in 14 months, slipping to \$1.2529 to the dollar at one point. The dollar’s rise, and the burgeoning fear of a slowdown in global growth, sent commodities prices lower. Crude oil fell \$2.81 to \$77.16 a barrel.

—*Graham Bowley, The New York Times*

McCartney, CDs and boomers feed indie label’s growth

In April, Concord Music Group, an independent label, announced two deals, one to distribute Paul McCartney’s post-Beatles catalog and another to buy Rounder Records, the roots label from Boston whose “Raising Sand” won a Grammy for best album in 2009.

Those two additions are the latest in a years-long period of growth for Concord, which is based in Beverly Hills.

He thinks people will pay for that music, too, especially the fans he calls the adult audience. Concord has focused its attention on that group, trying to lure people less inclined to chase the latest pop sensation and more interested in music Barros describes as “timeless and authentic” — more McCartney and less Justin Bieber.

While the company has suffered less than the major labels from illegal file-sharing, fewer stores now sell CDs, and those that do often devote less shelf space and push out smaller genres.

—*Joseph Plambeck, The New York Times*

MIT ONLINE SUBJECT EVALUATIONS ARE NOW OPEN

Evaluate subjects and teachers through Monday, May 17 at 9am:
web.mit.edu/subjectevaluation

View past evaluation results:
web.mit.edu/subjectevaluation/results.html

ALL FEEDBACK IS READ AND VALUED... especially your written comments!



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would be forced to buy a meal plan. It also decided the set of plans that the group would initially consider, all of which cost at least \$1,850. HDAG opened its online Idea Bank to solicit student questions and suggestions three weeks later than planned. The group's responses to Idea Bank entries are almost as vague as the posted

meeting summaries and have no attributions. And, the Division of Student Life has failed to adequately engage the Undergraduate Association in its discussions, both inside of HDAG and out.

Still, HDAG's practices and purview represent an improvement over some of DSL's previous attempts to

tackle the dining issue. The fact that the Idea Bank exists at all is a step forward in terms of transparency, and so are the meeting summaries. The House Dining Review website aggregates an impressive amount of information about current issues with dining as well as the history of dining at MIT, including all major dining-reform-related documents since 1956. Perhaps most importantly, the Division for Student Life listened last year when students objected to campus-wide dining reform — as a result, HDAG's current plans will only affect dorms with House Dining. These are all steps in the right direction, but further progress must be made if the Division of Student Life is truly committed to making its decisions transparent.

The Tech reported on April 9 that HDAG planned to announce its new meal plan during the week of May 3. That week has just passed. If the group is finding it needs more time to incorporate student opinion, then by all means, they should keep on talking. But in the meantime, it should post more detailed minutes that keep the student body informed.

Tall tales, tamed truth

How shifting baselines turn the past into myth

By Holly Moeller

Last week, my dad and I had yet another conversation about privacy. It makes him nervous to consider what gets broadcast where and stored away by whom on the World Wide Web. Chances are, your parents feel similarly about the explosion of tell-all networking sites and one-click shopping pages that save your credit card info and life history details. Meanwhile, many of us don't bat an eye when asked to supply birth dates and cell phone numbers, while a string of relationship dramas play out across our Facebook walls.

There's a term for this inter-generational switch in sensibilities: shifting baselines. Because you and I grew up in a virtually privacy-free reality, we're much more relaxed about our personal information than previous generations, who came of age when "normal" meant sharing less.

However, both you and your parents probably agree that lobster makes for a

classy meal, but eel isn't fit for the holiday table — even though neither of those beliefs were in vogue a few generations ago. That's because shifting baselines apply to our environmental perspectives, too.

Indeed, the phrase was coined by a fisheries scientist: Daniel Pauly first wrote about the phenomenon in 1995 to describe how our forgetfulness drives overfishing. Here's the troubling, but typical, timeline. Fish X swims its native waters in high numbers. Life is good. Then, someone discovers that it is delicious and — because it is plentiful — cheap. X's popularity skyrockets: it graces every menu and dinner table. But then X becomes overfished, and populations fall. Prices rise, and the new premium imparts an air of exclusivity, driving fishermen to scoop up the last few individuals for exorbitant profit. Meanwhile, for those who can no longer afford it, the fish simply fades off the map: it is no longer part of daily existence on the dinner plate, or present in local streams and rivers. Fishermen become acclimated to

smaller catches, then no catch at all. Eventually, the once-popular food is forgotten altogether; even conservation plans don't consider X. It is a species lost in time.

On the East Coast, that's the story of shad (fishing boats used to haul four million pounds out of the Hudson River each year; now we just pull out the occasional airplaneful of people), salmon (ever eaten an Atlantic salmon that wasn't farm-raised?), and even eel (yes, it was once part of the Christmas spread). We've since turned to new targets. Animals that used to be considered "trash fish" fit for only the poor or prisoners (think lobster in the 1880s and abalone around 1900) have become expensive delicacies.

The phenomenon isn't exclusive to the ocean. Picture Hawaii. Chances are, images of palm trees and pineapple spring to mind. But these species aren't native to the islands: they're just two of the thousands introduced over the course of human his-

Baselines, Page 5

An article last Friday about dorm crowding reported a number that was relayed to *The Tech* in error. The class of 2014 will not have “around 1,300” students. According to Dean of Admissions Stuart Schmill ’86, MIT is planning to enroll 1070 students for the class of 2014, the same target for last year’s incoming class.

A listing of National Academy of Engineering awardees on Friday, Feb. 19, gave an outdated title for Cynthia Barnhart PhD '88. She has not been co-director of MIT's Operations Research Center since January 2010.

Editorials are the official opinion of *The Tech*. They are written by the editorial board, which consists of Chairman Steve Howland, Editor in Chief Jeff Guo, Managing Editor David M. Templeton, Executive Editor Natasha Plotkin, Opinion Editors Joseph Maurer and Ethan Solomon, Contributing Editor Michael McGraw-Herdeg, and Advisory Board member Andrew T. Lukmann.

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Israel Innovation Week is just Israeli public relations
MIT should not support Israel's attempts to polish its image.

By Kamal Ahmed

Science and technology should be used to benefit humanity, not to destroy it. Sadly, MIT's Global Education and Career Development Center (GECDC) betrayed this principle this past weekend when it co-sponsored a weekend of exhibits, presentations and events billed as "Israeli Innovation — Healing the World through Technology" at the Museum of Science. Israeli Innovation Weekend (IIW) was co-sponsored by the Consulate-General of the State of Israel to New England, which is also one of the events top donors; nearly half of IIW's steering committee is made up of consulate staff.

The U.S. singles out Israel for special treatment, lavishing it with billions of dollars in economic and military aid.

The slick exhibitions featuring Israel's technological advances and flashy panels were designed to wow the public and lure venture capitalists. However, IIW was hardly an innocent educational event. It was, instead, part of a state-sponsored campaign to re-brand Israel and distract attention from its atrocious human rights record and its brutal treatment of the indigenous Palestinian population; the Palestinians are obviously not part of the "world" being "healed" by Israeli technology. Even though the "Brand Israel" project dates back to 2006, its propaganda or "hasbara" value has become all the more critical with the findings of the Goldstone Report, a

study commissioned by the United Nations Human Rights Council on the Gaza conflict. It is unfortunate for this PR campaign that Judge Goldstone has a realistic view of what “healing through technology” feels like in Gaza.

Propaganda efforts such as IIW are key to sustaining the virtually unconditional U.S. support for Israel. The U.S. singles out Israel for special treatment, lavishing it with billions of dollars of economic and military aid every year and protecting it from any concerted action by international institutions to hold it accountable for its human rights abuses.

Yet our “special relationship” is with a country that systematically privileges the Jewish over the non-Jewish inhabitants of Israel/Palestine. Israel does not merely discriminate between its citizens, although that would be bad enough: through the Law of Return it allows foreigners with no link to the country other than religion to arrive and enjoy more rights than non-Jewish natives while disallowing the return of Palestinians ethnically-cleansed since 1948. This apartheid regime is a source of instability and the political arrangement that Israel seeks to maintain. It perpetrates war crimes and other human rights abuses that regularly draw the censure of the international community.

Some may wish to put politics aside when discussing science, but IIW's own program shows how impossible this is. One of the featured speakers was president of The Technion, an institution with a long track record of developing technologies of death used by Israel's military (and exported elsewhere, including to the U.S.). These include remote-controlled bulldozers for demolishing Palestinian homes and drones for targeting Palestinians from the

air.

The Technion has established a joint research center with Elbit, a manufacturer of unmanned drones and surveillance technology used around the wall that encircles Palestinian villages and confiscates more and more of their lands. This wall was ruled to be illegal by the International Court of Justice back in 2004. A major Swedish pension fund recently divested from Elbit for its complicity in violating international law.

Through a misleading set of presentations, IIW showed itself to be nothing but a shallow propaganda event.

IIW also hyped eco-friendly technologies to “greenwash” Israel’s reputation, but chose dubious partners for this. Its program included Dan Senor, who was the public face of the Coalition Provisional Authority in Iraq. It also showcased “Better Place,” an electric car manufacturer that hired Maj. Gen. Moshe Kaplinsky as CEO of its Israel branch. Kaplinsky coordinated the massive Litani Offensive in 2006 in the last 72 hours of the Lebanon war while cease fire negotiations were underway.

Even putting aside these sordid links between the Israeli government, high-tech sector, and research institutes, the sheer dissonance between IIW's celebration of Israeli triumphalism and the reality of an apartheid regime was breathtaking. How can anyone laud Israel for advances in energy efficiency when it punishes the millions of Palestinians living in the Gaza

Strip by deliberately reducing their fuel and electricity supplies, causing prolonged shortages that are severely impacting hospitals and all aspects of daily life?

How can we let Israel brag about its advances in water technology while it is refusing to allow Gazans to fix the water and sewage systems that its army had destroyed, leaving 95 percent of Gaza's water now unfit for human use, as documented by Amnesty International?

How can anyone boast about Israel's advanced medical technologies when the government prevents Palestinians who need urgent medical care access to its hospitals, while simultaneously preventing Palestinian hospitals from receiving even basic medical supplies?

How can we allow Israel to promote itself as “healing the world” when it has a policy of slow strangulation of the Palestinians, allowing Palestinians, in the words of a November 2007 Red Cross report, “with just enough to survive, but not enough to live normal and dignified lives”?

By avoiding these questions through a staggeringly misleading set of presentations, IIW showed itself to be nothing but a shallow propaganda event. The sponsorship of “neutral” institutions like GECDC is crucial for covering up the underlying political agenda of this propaganda effort.

Science and technology have a place in helping to achieve peace with justice in Israel/Palestine, but being paraded out in cynical government-funded PR campaigns is not one of them. GECDC should not have participated in the Israeli Consulate's attempt to "re-brand" Israel.

Portions of this column were previously published as part of an "Open Letter to the Boston Museum of Science" which was co-authored and signed by the author.

Mother Nature's changing baselines

Anthropogenic changes have big impacts on how we perceive the environment

Baselines, from Page 4

tory. Today, “native” Hawaiian ecosystems survive in a few isolated places at high elevations. Most of us never see them, so our baselines consist of coconut milk and guava juice.

For an example that hits closer to home, think of our own treasured Northeast forests. Today's leafy patchwork may be beautiful, but it's nothing like the dense woodland that was first cleared to make way for colonial cropland. Or consider the Great Plains to our West, which once teemed with bison, and today hold corn, wheat, and highways with 70mph speed limits.

If we're lucky, some of these historic baselines are immortalized in history textbooks, sketches, and photographs. Still, they have taken on the air of myth and legend, of tall tales and exaggerations told by the old to impress the young. We have a hard time believing such things once really existed because it means denying our own baseline, the conditions we've experienced ourselves.

This is a huge problem in conservation

because present-day improvements lack historical perspective. In the Northwest's Columbia river, where wild salmon do still run, the fish population has doubled since 1930. But this seemingly monumental improvement is considerably less profound when we remember that the 1930 baseline represents only 10 percent of the historical population. Still, locals describe the salmon conditions as "better than ever," which is admittedly true in their personal experience.

**Go see as much
“wilderness” as you can.
Marvel at its beauty, but
also learn some of its
history.**

Unfortunately, it's in our nature to forget history in favor of the evidence of our own experience. How many times have your parents rolled their eyes as you made the same mistake they warned you about because, well, you just had to "see for your-

self"? How often do you dismiss old-timer stories about fish of monstrous proportions because you've never seen a fish half that size yourself? In China, the fishermen of our generation have already forgotten about the Yangtze River dolphin, the charismatic species that generated international protest against dams and pollution. The dolphin probably went extinct within only the past ten years.

Putting “beautiful”, “natural”, and “normal” into context is extraordinarily difficult in the face of changes that develop over decades and centuries. Our expectations are reduced as our collective memories fade: history becomes myth becomes forgotten. Meanwhile, our children spend less and less time outdoors, so they place diminished value on the natural world. Our wild places shrink and disappear, leaving science and society with fewer and fewer opportunities to experience at least somewhat authentic baselines.

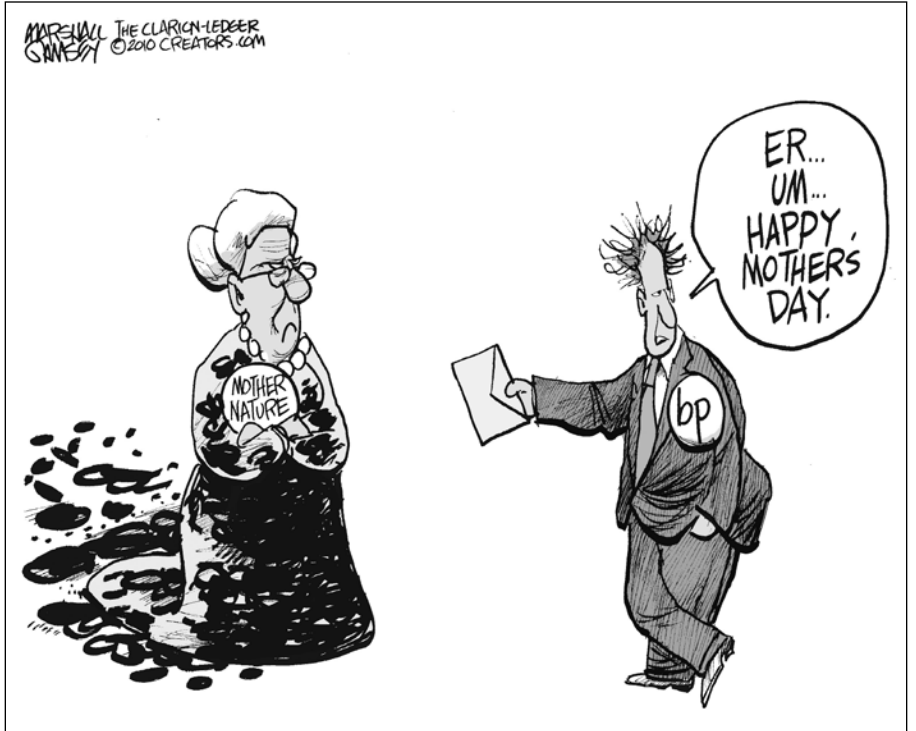
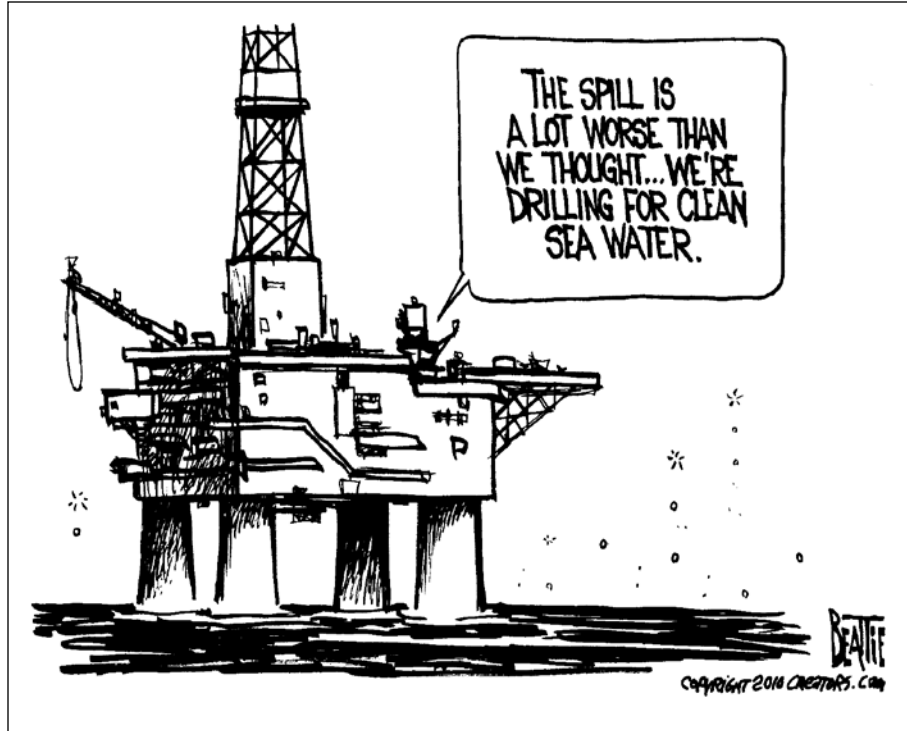
Of course, even if our memories were perfect, we couldn't turn back time and restore ecosystems to pristine states. We have too many mouths to feed to hand the bison

back their entire range, too many dams for power and water to let spawning fish run free. And the inexorable forces of evolution and, lately, climate change, ensure that nothing can remain frozen in time.

Still, calibrating our baselines is a good idea. Go see as much “wilderness” as you can. Marvel at its beauty, but also learn some of its history. Imagine how the place must have looked before humanity came to play. Listen, really listen, to the stories of the past: are they so unbelievable if you remember how much the world has changed? Tell your own stories, and keep telling them, to your children and their children after them. Make sure we remember the wealth of nature around us, but also understand what it was once worth.

Here's one for table talk at your next \$50 surf-and-turf dinner. It begins, "Did you know that lobster used to be prison food because no one else would eat it?"

Holly Moeller is a graduate student in the MIT/WHOI Joint Program in Biological Oceanography. She welcomes reader feedback at hollyvm@mit.edu. "Seeing Green" runs on alternate Tuesdays.



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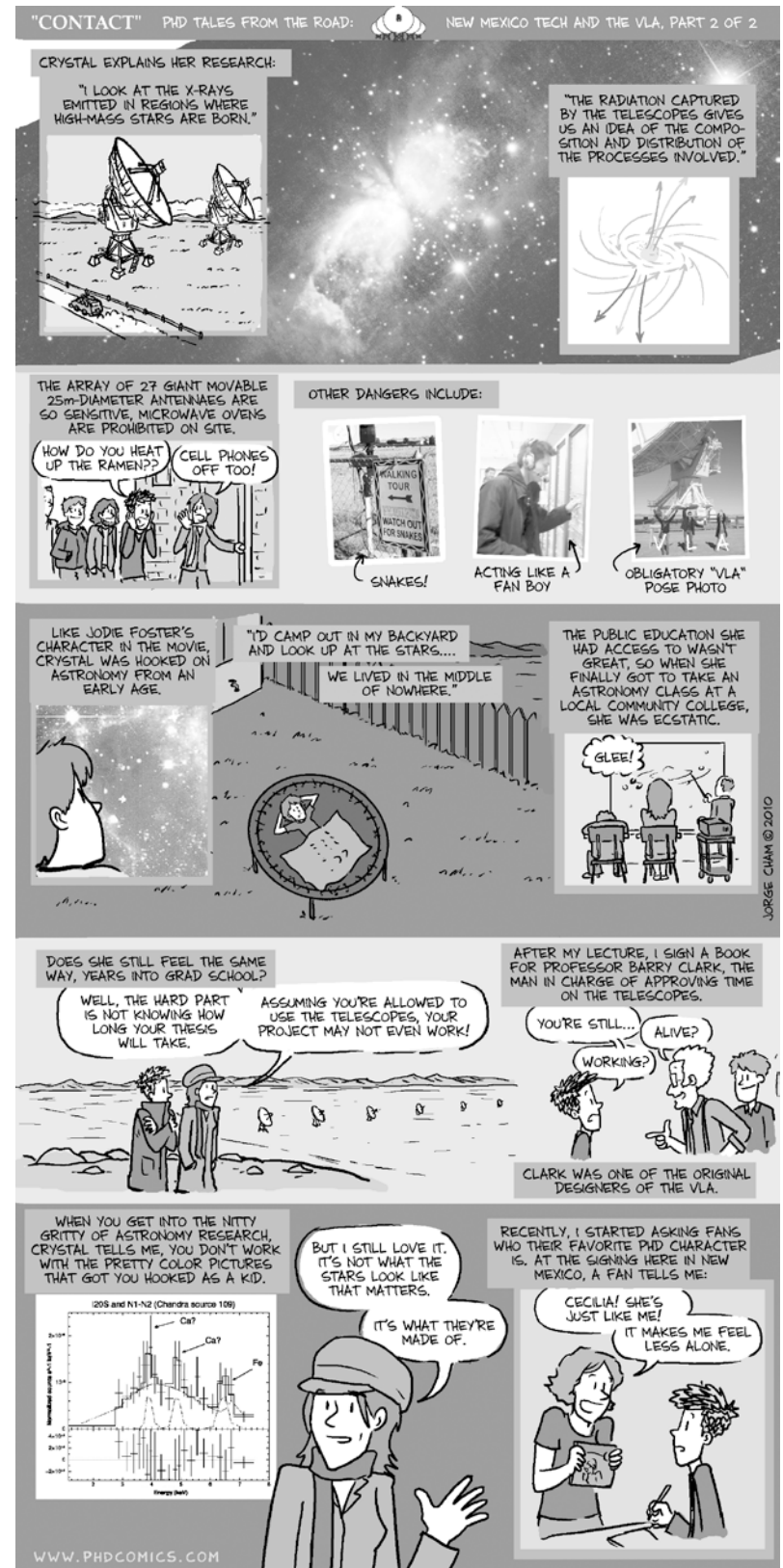


PILED HIGHER AND DEEPER

Piled Higher and Deeper



by Jorge Cham



Sudoku

Solution, page 12

			8				2	
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	2	8		1				
	9	5	2		3			
			5		1	7	3	
				6		3	4	
6		9	7	4	2		5	
	4				8			

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Kenken

Solution, page 12

120×	3÷	3÷	24×		
			1—		30×
	3+		2—		
3	1—			36×	
2÷	2—	30×	5—		
				20×	

Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1 through 6. Follow the mathematical operations for each box.

Physicists rock out, boogie down

Tangos, electric guitars, and ‘tricks’ make night fun

Physics rock, from Page 1

fessors put on a rock concert? Before the show, Fisher stated, “It’s what we do.”

He and Paus laughed, joking that Phil Specter and Mick Jagger were going to show up. A moment later, Fisher added to ask him again after the show.

Tensors and Tangos

In addition to music, the show included a tango and some backflips.

It opened with the Quantum Beats, a group Paus joked illustrated the depth of physics: “You might hear some random beats” in the music he said, referencing the random nature of quantum physics.

The band played four songs; during the first one, several audience members dashed to the stage and danced along with the performers. The following song featured a mandolin solo by Ben Sena, a freshman in Course 16.

“Not very long,” said Sena, asked about how long he’s played the mandolin. “I’ve played guitar for a while,” and playing the mandolin was just a question of “using my guitar experience and knowing the difference” between the two instruments. He chose to play mandolin instead of guitar during the performance since the band started with six guitars. As he described it, the choice was an attempt to “alleviate the pressure of the guitar density.”

Praising the Quantum Beats, Fisher said that it was good to know that MIT physicists had “something to fall back on when physics tanks.”

Paus introduced Professor Vladan Vuletic, who works with atomic collisions and was going to tango with his wife, as a “diatonic molecule” for the evening.

More undergrads rock out

One of the highlights of the evening was certainly the “Mystery Act,” a trio comprising of Yan Zhu ’12 on drum and vocals, Cappie Pomeroy ’13 on keyboard and vocals, and Scott Johnston ’13 on cello. They performed two songs, introducing the first as the “rock part of the concert” and the second as the “physics part”

“We came up with this last night,” said Zhu. Pomeroy later confirmed this as true.

“Granite is not an edible rock,” sang Pomeroy, “Not like pop rocks or those other tasty candies.”

The blues song was an amusing compilation of puns and Doppler shift jokes: “I’m so blue-shifted that my force space vector is null,” they sang. The two songs were met with considerable laughter from the audience and gratuitous applause at the end.

Before the next act, there were some technical difficulties: The two professors fidgeted on stage nervously.

“Peter, tell a joke,” said Paus. A moment later he realized his mistake, “Oh... I meant Professor K.”

Fisher stood speechless, “I can’t just tell a joke...”

Fortunately, the MCs were saved by the AV coming through. Javier Sanchez-Yamagishi G did a hip hop dance, apologizing beforehand for being “out of shape.” “Graduate school takes the energy out of you,” he said.

Before the break, Javier Duarte, a senior in Course 8, “learned” to do a backflip. After seeing a friend do a flip, Duarte asked him to teach him the trick. When the friend explained the basics of jumping and tucking in, Durate refused to try, saying it sounded “too complicated.” Once the friend explained it in physics terms (including writing several equations

anyone who’s taken 8.01 is sure to recognize) Duarte exclaimed, “Why didn’t you say so?” and immediately executed a flip.

The final act

The final act, Asymptotic Freedom, sang a number of songs. Their rendition of the classic La Bamba once again brought the “Course 8 dancers,” as the professors had nicknamed them, to the stage. This time they were joined by a number of other people in the audience, including the two MCs. The group danced for a while and eventually formed a conga line and paraded around the stage.

Matthew Celaya, a student in 8.02 L06, Fisher’s Electricity and Magnetism section, said he thought that seeing his professor dance on stage was “hilarious. I want to see it all the time.”

The night ended to great applause. Paus joked about using a neuralizer to wipe the audience’s memory. Putting on sunglasses and pulling out a camera, he took a picture of the audience, and then immediately declared the show was over.

After the show, Fisher revealed why the physics rock concert was put on this year: Gesturing towards Paus who was standing on the other side of the room, Fisher said “I wanted to do something with my friend Christoph. It sounds goofy, but I work with all of these people,” he said. Putting on a show together allowed him “to see an entirely new side of everybody,” he said, He gave the example of Yelena S. Bagdasarova ’11, who sang with Asymptotic Freedom and is a Teaching Assistant in L06: “I didn’t know she sang,” he said.

“That’s why we do these things,” Fisher continued, “There’s a reason we stay at a university.”

He finished, “the people are more exciting.”

Jahnke loses life to pancreatic cancer

Jahnke, from Page 1

Beginning in May 2008, he attended MIT as a graduate student in Meche’s Naval Construction and Engineering Program. Shortly after he joined the MIT community, Jahnke was diagnosed with terminal pancreatic cancer. Following several rounds of chemotherapy, he pressed ahead with his studies, determined to earn his degree before his life ended; in February, he received a SM in naval architecture and marine engineering.

“It was something he very much wanted even though he knew he was dying,” said Dean for Graduate Education Steve Lerman, whose office worked closely with the Department of Mechanical Engineering to arrange for Jahnke to receive his degree before the lieutenant passed away.

“Josh inspired all of us through his extraordinary perseverance and spirit,” said U.S. Navy Commander Trent Gooding, associate professor of the practice of naval construction and engineering. “He was a remarkable man, passionate and devoted to the Navy, his family and God. We miss him terribly, but that legacy will live on with each of us who had the privilege of knowing him.”

Jahnke, was born in Florida and was raised there and in Massachusetts. He attended Pensacola Christian College before receiving a BS in mathematics with a minor in law from the University of West Florida in 2003. He received an MBA from Charleston Southern University in 2008.

Jahnke received a direct commission in the United States Navy from Naval Reactors and

completed Officer Indoctrination School in Newport, R.I. He reported to Naval Nuclear Power Training Command in April 2004 and served as a Mathematics and Reactor Plant Technology instructor. Subsequently he was assigned to Nuclear Field “A” School and served as the Mathematics Division director and command training evaluator. He was then selected for lateral transfer into the engineering duty officer community.

In addition to receiving his graduate degree from MIT, Jahnke also received the Naval Sea Systems Command Award in Naval Construction and Engineering at MIT. He was authorized to wear the Navy-Marine Corps Commendation Medal, the Navy Achievement Medal, the Humanitarian Service Medal and several other awards.

Jahnke leaves his wife of five years, Tricia L. (Geyer) Jahnke of Hudson, and his two daughters, Grace Marie and Juliana Laree Jahnke. He is also survived by his parents, Jeffrey J. and Marie T. (Green) Jahnke of Derry, N.H.; his sister, Jessica L. Phillips of Ankeny, Iowa; his paternal grandmother, Sarah L. Jahnke of Cuba, N.Y.; his father- and mother-in-law, John and Grace Geyer of Milford, Del.; and his many cousins and friends.

Funeral services were held earlier this week. In lieu of flowers, donations in his memory may be made to: LT Josh Jahnke Children’s Memorial Fund, c/o Avidia Bank, 42 Main Street, Hudson, MA 01749.

This obituary originally appeared at <http://web.mit.edu/newsoffice/2010/obit-jahnke.html>.

—The MIT News Office

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***Iron Man II* is a tofu salad after prime steak**

When I first heard of *Iron Man 2*, I felt my expectations torn between two conflicting masters. On the one hand, the film is a sequel to *Iron Man* and contains everything that I love in a movie: robots, explosions, and a protagonist who isn't Shia LaBeouf. On the other hand, the movie is a sequel, period. Nothing is better the second time around; from KISS reunion tours to warfare in Iraq, sequels are always a mistake. So not surprisingly, the film fails to live up to its predecessor. If watching *Iron Man* was like the first prime steak you ever had, then watching *Iron Man 2* is like following it up with a veggie burger and a tofu salad.

Iron Man 2's star-packed cast is certainly the best part of the film. The movie is undeniably funny, and benefits from the wealth of star power that it gleefully hurls at the audience's face. Mickey Rourke does an excellent job embodying all of America's deepest fears (a terrifying foreigner with facial hair), while Gwyneth Paltrow and Don Cheadle both deliver funny and surprisingly deep performances for a traditional superhero flick. The budding love story between Paltrow and Downey Jr. is also handled well; the two carry out a refreshingly chaste relationship (one of many aspects of the film which engineers in the audience can relate to), which helps to add some tension to the movie without becoming vomit inducing.

A close-up shot of Tony Stark in his Iron Man armor, smiling broadly. The armor is red and gold, with a glowing arc reactor on his chest. He is looking off to the side, and the background is dark and industrial.

Robert Downey Jr. reprises his role as the charming and ambitious inventor in *Iron Man 2*.

Like a lights-out performance on a first date, the former *Iron Man* movie set the bar too high.

What really disappointed me about the film, however, was the fact that the film never gets down and dirty to blow things up in a satisfying manner. Perhaps I've just been inured to special effects — Retina-blowing graphics and shellshock-inducing explosions have become utterly commonplace, and one can hardly watch an hour's worth of TV commercials without seeing a photorealistic depiction of a Wendy's sandwich engulfed in napalm. Films like *Avatar* were the gateway drug to gratuitous sci-fi action, and it's difficult as a desensitized viewer to go back to a film which doesn't make you feel like you've just survived an aerial bombardment. It takes explosions on the level of destroying Bolivia with a comet made of active volcanos to impress today's movie-goer, and (spoiler alert) it doesn't happen.

Learning to enunciate

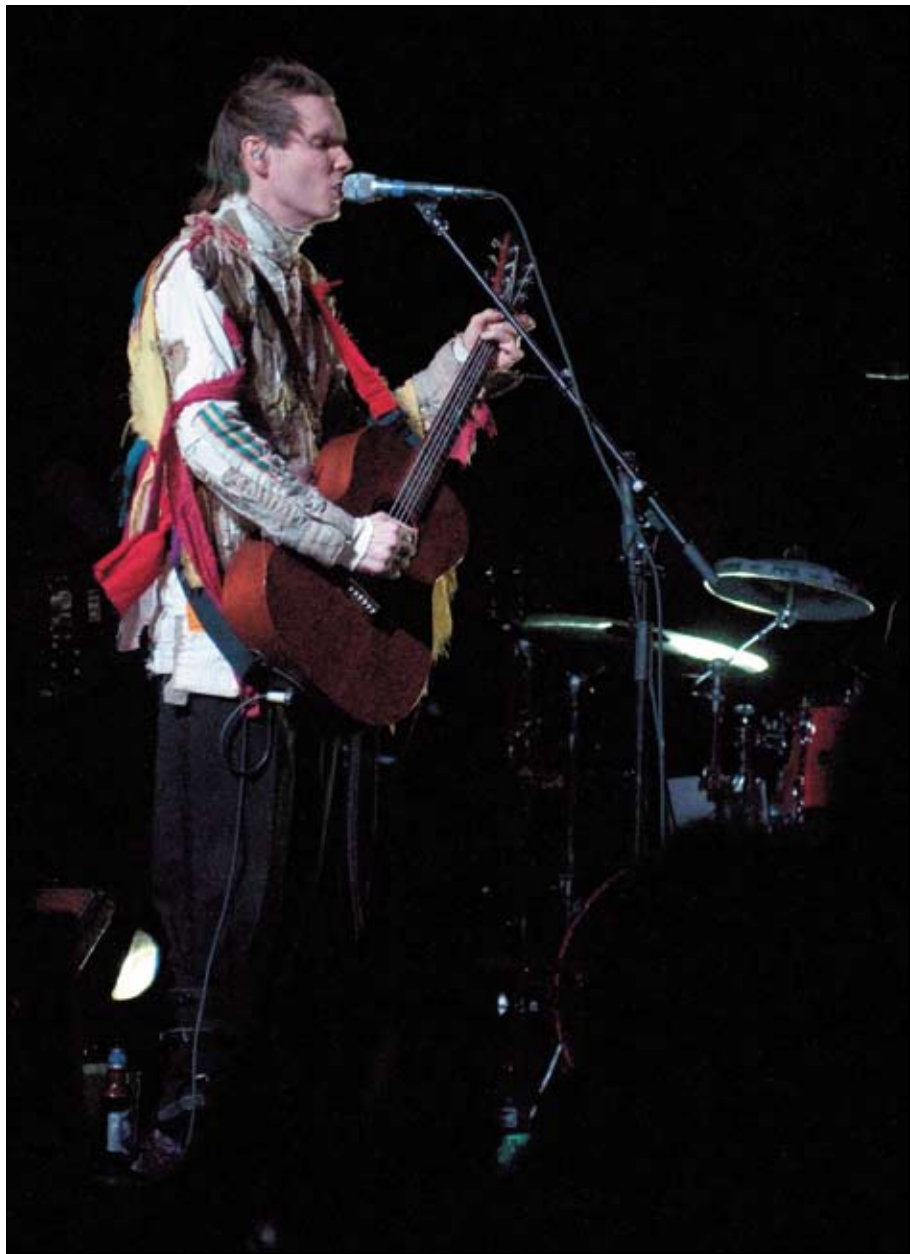
"I don't think any of us need roadies. I'd rather have good snacks and good beer."

CEG: I don't think any of us need roadies. I'd rather have good snacks and good beer.

CONCERT REVIEW

Feathered headdresses, hypnotizing songs

Jónsi breaks away from Sigur Rós for a beautiful new direction



ANDREA MILENA PAGÁN

Jónsi captivates the crowd with his hypnotic falsetto at the House of Blues in Boston last Wednesday. The lead singer of Icelandic band Sigur Rós, he is currently on tour promoting his first solo album, *Go*.

By Andrea Milena Pagán

STAFF WRITER

After much anticipation, Jónsi finally decided to take a breather from Sigur Rós and go solo. Upon walking on stage, he looks shy and unassuming. With his feathered headdress and raggedy clothes, I imagined him and his band as nomads who go from place to place to tell a powerful story about the journey to freedom. As soon as he parted his lips to sing, the crowd quieted down to listen.

His first few songs were slow but hypnotizing. He completely transforms when he puts his fingers to his guitar, his presence imposing and his voice beckoning you to get closer, to go deeper. Like moths to a flame, we flocked to him. He closed his eyes while he crooned into his microphone in his native tongue and I had no idea what this gibberish meant, but I could feel it. His voice trembled with fear and his wistful face said all there was to be said. He was a caged bird who lived gazing between the bars, waiting for the moment to escape.

One only begins to ascertain the power of his voice and his words with Tornado, in which fear destroys him from the inside. "I wonder if I'm allowed to ever be free," he pondered, and a little later, images of animals fighting yield to a window breaking as the backdrop falls.

The story is put on hold while Jónsi greeted the crowd for the first time during the concert, about 30 minutes in. With some small talk about the Red Sox game next door, he lightened the mood and moved on to Go Do, an anthem for liberation. I flailed my arms in the air and stomped around, dazed like the rest of the crowd and smiling like an idiot. Brightly colored lights shone on us as he extended his arms and danced around, the fabric dangling from his sleeves making him look like a winged warrior.

The thing about listening to Jónsi perform is that it is always satisfying. His records are beautiful, but the nuances in his songs are much more noticeable live. His voice breaks a little and you can listen to him take gulps of air to sing the fast ending to “Boy Lilikoï”, and the quirks lend charm to his performance. His music is much more moving when you

Jónsi

House of Blues Boston

May 5, 2010

can see that he's not only playing, but living, feeling, breathing his music. And while he prefers to stay in his bubble and limit interactions with the audience, it would be superfluous anyway. A brilliant performance like his does not require winning the crowd over with cheesy sing-alongs and everybody-put-your-hands-togethers.

His band does not go without praise. In the few instances I could tear my eyes away from Jónsi, I focused my attention on the piano and drums, the three of them having an interesting dynamic. Ólafur manages to master the full range of emotions Jónsi's songs dictate on the piano, while Polvaldur controls the intensity and depth of the sound. The rest of the band fills in the gaps to give the music some color. And while the music is so beautiful it could stand alone as a masterpiece, his words are a great complement. Jónsi has the playful soul of a child who believes that anything is possible and wants to grow out of his mold, and his lyrics show that. "We should always know that we can do everything," he tells the crowd, and it rings true in my ears.

Those who come to Jónsi expecting to get a concentrated dose of Sigur Rós: Prepare to be disappointed. Jónsi emphasizes that his sound is his own, and it shows. He stands front and center to set himself apart from the band backing him. Away from Sigur Rós and playing with younger people, he sounds rejuvenated and fresh, as if he needed the break. I would consider his solo act a complement to Sigur Rós, both working around the same idea but each giving it his own interpretation. Still, it is deserving of consideration from purists, since it feels like he is picking up where his last album with the band left off and taking that work in a new direction. And what a beautiful departure it is!

CONCERT REVIEW

Beware the orchestra nerd

MITSO tackles the art of the romantic orchestra

By Sudeep Agarwala

STAFF WRITER

They're clearly the most fun to make fun of in middle school and high school. Among a sea of athletes and garage bands, the pianists, percussionists, the trumpeteers, the clarinetists, and even violinists are social outcasts in the grand scheme of ridiculous adolescent social circles. But in the musical hierarchy, they're somehow top dog. They're cool; they sit at the back of the bus during band tours. Somehow they exude confidence, knowing they command the respect of the small circle of art aficionados, of the small enclave adults and peers that cultivate this sort of erudition.

Try lumbering up the front steps of the high school with a tuba as large as you are at seven in the morning or rushing off to the local church after school to practice the organ, or becoming proficient in the bassoon. Much worse: try being in choir. So long after we survive the gauntlet of high school, after we've licked our wounds and watched them turn into scars, there's an entire game of getting together with fellow ex-band geeks, choir dorks or orchestra nerds as adults: comparing notes, sympathizing, and, if you're wise, drinking heavily.

There's an important exercise in being ignored and largely ridiculed, as was demonstrated by the MIT Symphony Orchestra under the leadership of Adam Boyles on the evening of Friday, March 7th. In addition to a well structured and even-keeled performance of Romantic orchestral works, MIT-SO's performance showcased some of the dark horses of our graciously fading youth, exemplifying what ardent students of the not-so-popular arts can achieve and deliver.

Friday's concert began with Carl Maria von Weber's *Andante and Hungarian*

Rondo, featuring Benjamin Steinhorn '12 on bassoon. Weber's work is decidedly difficult. Although his narrative and harmonic language is one that we're largely familiar with and largely enamored of, it is also one that requires sharp contrasts and dramatic shifts in both character and timbre. Steinhorn was well appreciated by the orchestra. Graceful and strikingly precise, Steinhorn's ability to construct a sweepingly lyrical line and attention to detail was prominent and well-balanced both as soloist and accompaniment to orchestra. Boyles's MITSO responded in kind, embracing the intricacies of Weber's labyrinthine score. Both soloist and ensemble produced a strong, unified thesis as to what Weber's work fundamentally means.

Friday evening's concert concluded with Camille Saint-Saëns's Symphony No. 3, the *Organ*, so named because of its prominent feature of the keyboard instrument throughout the two-movement work. Boyle's introduction to the work prepared us, but by no means warned us of the striking tonality of the instrument. Although, yes, a stolid, Romantic work, Saint-Saëns's sensibility throughout the entire work is somehow more fragile than those of Wagnerian or (even) Brahmsian counterparts. Moments of the work slip into Schubertian reveries, or seem to imitate Beethoven at his most meditative and careful; even the eponymous instrument of the symphony enters into the work almost unnoticed, and it's not until the *Maestoso* portion of the second movement that we realize the true hymnal nature of the work and it's requirement of the church instrument for the work's summary realization.

A challenging work, the orchestra responded well to the unfamiliar timbres of the orchestra. Zach Bjørnson '10, at the or-

gan, is of particular note: a testament to his command of the instrument, Bjørnson's organ maintained a staid and decorous accompaniment to Boyles's leadership when required, yet unleashed the masterful chorale demanded in the final movement of the piece. Also of note were the piano duet of Dustin Katzin '12 and Jean Sack '13, whose treatment of Saint-Saëns's four-handed ornamented hymn setting in the final movement was nothing short of virtuosic.

But this is not to ignore the choral work of Friday evening's concert. Commissioned and composed in 1965, Leonard Bernstein's *Chichester Psalms* are certainly not part of the standard Romantic repertoire, yet command much of the discipline and thinking that were prevalent in Weber's and Saint-Saëns's work. Tender lullabies burst into violent war-cries on the turn of a dime, and craggy poly-rhythmic sections underscore sweeping lyrical lines. Although Bernstein's tonal world is one both Weber and Saint-Saëns would surely have recoiled at, after *West Side Story* and *Candide*, it is one that is almost as familiar and nostalgic to our modern ear.

How lucky, then, to be Sammy Andonian, and to have heard the things he's heard by the age of twelve. The boy soprano of the middle movement of Bernstein's three-movement work, Andonian was charged with the weighty words of none other than Psalm 23 (*The Lord is my shepherd*, I shall not want, or, in Bernstein's setting of the Hebrew: *Adonai ro-i, lo ehsar*). Although a strikingly beautiful melodic line, it's easy to forget how disciplined a musician is necessary to sustain Bernstein's lyricism and to negotiate Bernstein's eclectic counterpoint. Andonian delivered expectation and far more, singing the ancient words with a clear pitch and a resonant tone, unfettered by the shouts and murmurs of the roaring men's voices of the

MITSO and MIT Concert Choir

Adam Boyles, Conductor

Kresge Auditorium

Friday, May 7, 2010

MIT Concert Chorus.

Interplay between choir and orchestra was also striking — although it's simple to prefer one ensemble over the other, Boyles's realization of the intermixing between the two ensembles (MIT Concert Chorus, prepared by Mr. William Cutter) balanced both ensembles such that the dramatic narrative corresponded freely between the two strikingly different groups. Small ensemble solo work by members of the MIT Concert Chorus were well balanced and supported by the sensitive playing of the MITSO.

MITSO's Friday evening performance concluded the musical season for the orchestra as well as the chorus on a markedly high note. This is no small task for the two ensembles, after an eventful year including a visit from internationally renowned conductor Gustavo Dudamel, commissions from Peter Child, and collaborations with each other in celebration of Mendelssohn's bicentenary as well as with the Jazz Ensemble. Such a vibrant and active music department, eager to showcase its student talent and achievement, is testament not only to the ongoing energy of the music department, but also the zeal and considerable abilities of the students it trains. MITSO resumes its season next academic year on Friday, October 22.

Tang defense: mental illness

Tang, from Page 1

additional time for discovery, and the Commonwealth required additional time to have Tang evaluated by an expert witness.

The trial was postponed from January 2009 to October 2009 and

then again to March 2010 and finally to this month.

The most recent events of substance in the case related to a motion (filed in August) from Tang to suppress statements she made after her October 2007 arrest, in light of her “mental illness.”

The Commonwealth filed its reply in November 2009, and the Court issued a 7-page decision denying the motion to suppress on March 8, 2010.

Tang’s trial will take place on May 24, 2010 at Middlesex Superior Court in Woburn.



SAM RANGE—THE TECH

MIT President Emeritus Paul E. Gray '54 speaks Friday at the inauguration of the Lobby 7 Design Contest. The competition, jointly organized by the MIT Class of '54 and the School of Architecture and Planning, asks MIT students to decide what should fill the four plinths in Lobby 7, originally intended for statues of Greek gods, but left empty following construction. Prizes of \$10,000, \$2,500, and \$1,000 will be awarded to the top three designs in separate undergraduate and graduate categories. The deadline for registration is Sept. 24, with initial designs due Nov. 5. While the School of Architecture and Planning is involved, MIT’s administration has no intent to actually erect any of the winning designs in Lobby 7.

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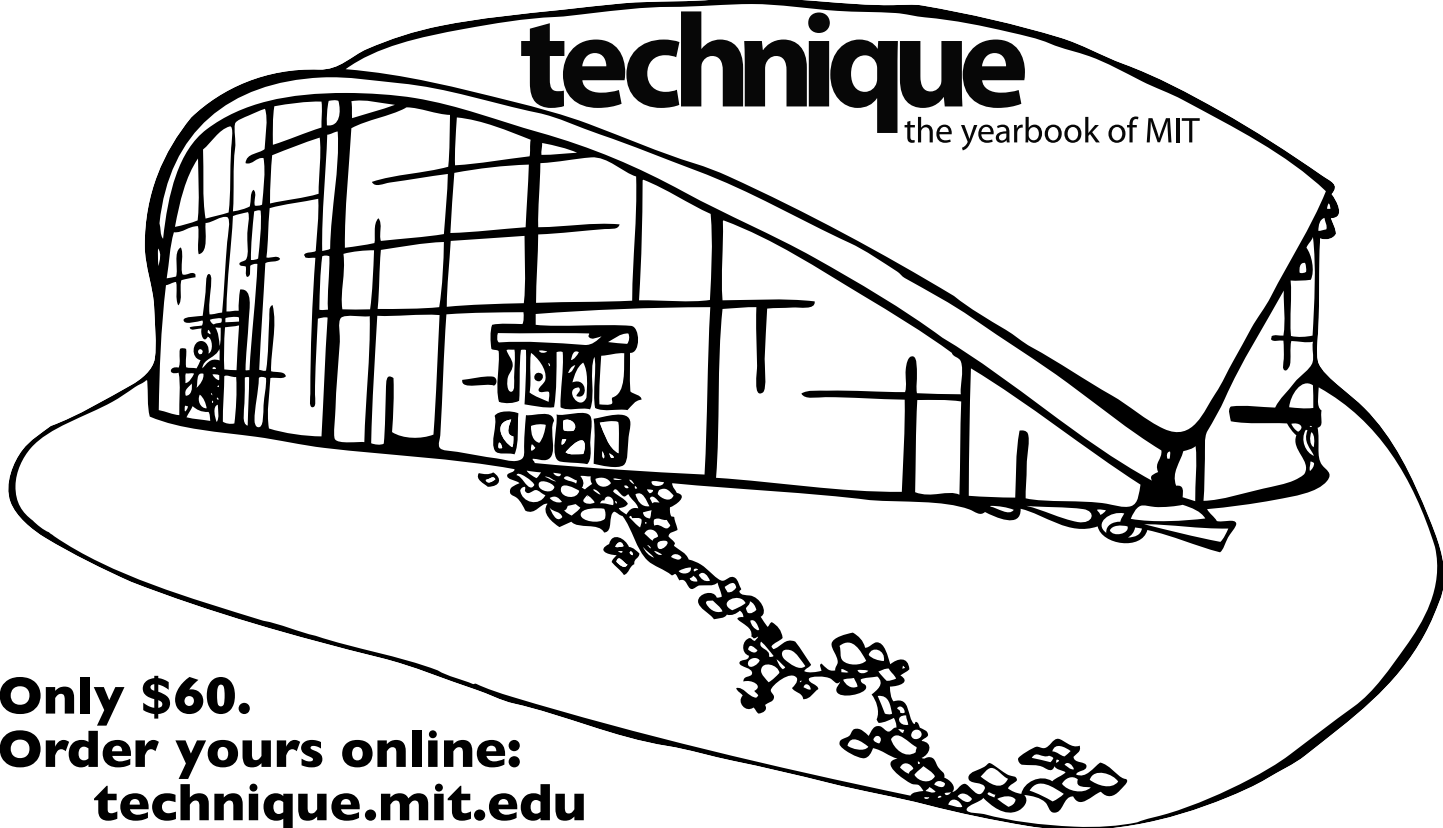
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Technique 2010

Solution to Crossword

from page 6

A	C	E	P	T	E	D	C	O	S	T	A	L
P	A	Y	P	H	O	N	E	I	C	E	A	G
E	T	C	H	I	N	G	S	S	H	A	P	E
R	A	L	E	G	L	I	S	T	E	N	I	N
C	L	I	M	E	E	S	T	E	R	O	D	E
U	P	S	E	T	S	T	O	R	S	C	A	R
S	A	T	R	A	P	S	O	C	I	A	S	S
A	S	I	F	D	I	O	R					
C	A	T	S	N	E	T	A	B	A	S	E	D
O	N	E	E	D	D	A	N	I	C	E	N	E
V	O	L	C	L	U	B	S	S	K	E	A	N
E	M	A	N	C	I	P	A	T	E	B	A	B
T	A	M	A	L	E	R	E	A	D	A	B	L
E	L	O	P	E	S	E	N	R	O	L	L	E
D	Y	N	A	S	T	T	O	N	E	L	E	S

Solution to Kenken

from page 7

120x	3÷	3÷	24x		
5	1	6	4	3	2
6	3	2	5	4	1
4	2	1	3	6	5
3	5	4	1	2	6
2÷	2÷	30x	5÷		
2	4	5	6	1	3
1	6	3	2	5	4

Solution to Sudoku

from page 7

1	5	6	8	3	7	9	2	4
9	7	3	6	2	4	8	1	5
4	2	8	9	1	5	6	7	3
8	9	5	2	7	3	4	6	1
3	1	7	4	9	6	5	8	2
2	6	4	5	8	1	7	3	9
5	8	2	1	6	9	3	4	7
6	3	9	7	4	2	1	5	8
7	4	1	3	5	8	2	9	6



DAVID CHEN—THE TECH
Phyo Nyi Nyi Kyaw '10 (left) directs Leadership Training Institute co-founder Semmie Kim '10 through a maze of balloons and cups at the Stata Center on Sunday during a game organized by high school participants in the LTI program. Over the past 12 weeks, the club has helped train students from local high schools in leadership so that they may go on plan and organize initiatives at their own schools and communities.

E-MAIL OF THE WEEK

In an email circulated around MacGregor House, the Waffle Fairies, a secret society dedicated to making surprise waffles available to chosen MacGregor residents, wrote the following:

“ONE OF YOU ENTRIES
TODAY WE HAVE WAFFLY BLESSED
WITH CARBOHYDRATES”

E-mail of the Week quotations are used with permission. In this case, they wrote:
“HARK THE FAIRY QUEEN
GRANTS YOUR REQUEST, MORTAL
REJOICE! IN OUR CARBS”

We want you in our sheets.



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Around 64 percent of admitted students choose MIT

A similar fraction of students accepted their offers of admission to MIT this year compared with last year, about 64 percent, according to admissions director Stuart Schmill '86. The enrolled class of 2014 will have around 1,070 students and a demographic makeup similar to the class of 2013, he wrote in e-mail. The admissions office is working to select “a small number” of students to admit off its waitlist over the next week and a half, wrote Schmill.

— Natasha Plotkin

new



MIT Libraries' Summer Hours begin May 22

For a complete list of locations and hours see the Libraries' website.

libraries.mit.edu/about/hours/summer10.html



Photo by Christopher Harting

Barker, Dewey, and Hayden (Humanities & Science) Libraries:

Monday-Friday 10am - 6pm,
Saturday closed, Sunday 1 - 6pm

Rotch Library:

Same hours as above except Sunday closed

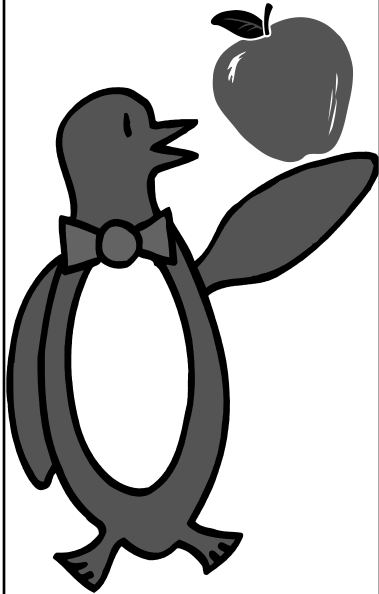
Lewis Music Library:

Monday-Friday 11am - 5pm,
Saturday-Sunday closed

Please note all libraries will be closed Memorial Day weekend (May 29-31) and for a week during the Independence Day holiday (July 2-9).

We have computers

You're probably Course 6



join@tech.mit.edu

The Sloan (Course 15) Course Bidding System (Sloanbid)
Bidding Dates for Fall, 2010 Courses

https://sloanbid.mit.edu

First time logging in? Use your MIT ID as both your log in and password. Follow instructions on the site to change your password or retrieve lost passwords. Once logged in, make sure and check that your information (i.e. program of study and graduation date) is correct.

Institute-wide bidding for Sloan (Course 15) subjects*:

Opens 9:00 a.m., Thursday, May 13
Closes 5:00 p.m., Thursday, May 20

Waitlist Round for closed Sloan (Course 15) subjects:

Opens 9:00 a.m., Tuesday, July 13
Closes 5:00 p.m., Tuesday, July 27

Section Swap Round for changing sections of pre-enrolled Sloan (Course 15) subjects:

Opens 9:00 a.m., Friday, July 30
Closes 5:00 p.m., Friday, August 6

Please contact Scott Alessandro, salessan@mit.edu, if you have questions regarding Sloan (Course 15) Course Bidding.

Successful bids will appear on your Registration Form on September 7 and will be posted on the bidding website as of July 13 -- write down your password to check results!

*For 15.011, 15.075, 15.279, 15.301, 15.305, 15.310, 15.501, 15.516, and 15.668, you can sign up directly through WebSIS starting May 3rd. It is not necessary to bid for these courses.

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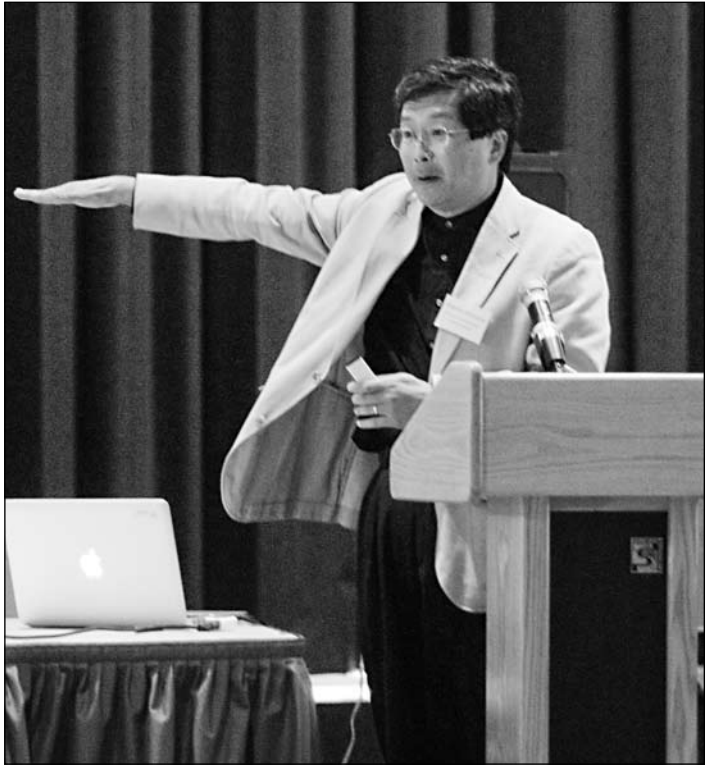
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Princess Len Carlos '13 flies a kite during the Bangladeshi Students Association's annual kite-flying festival to celebrate the coming of spring at the Kresge barbecue pits on Sunday. Sunday afternoon was windy with speeds of 21mph — wonderful weather for kite flying.

DAVID CHEN—THE TECH



MICHAEL YU—THE TECH

Shigehisa Kuriyama, professor of cultural history at the Harvard Department of East Asian Languages and Civilizations, speaks on the “Divergence of Greek Medicine and Traditional Chinese Medicine through the lens of media” during MIT Traditional Medicine Society's annual Big Event in Lobdell on Friday. Members of the MIT Department of Biological Engineering and Harvard Medical School joined Kuriyama afterwards for a panel discussion on the event's theme, “East meets West: Divergence and Reunion of Eastern and Western Medicine.”

Lobby 10 cameras return — for one week.

As of late last week, two video cameras have returned to Lobby 10, overlooking it from both sides, just as they were present during three weeks in February.

The cameras will only be up for one week, according to Thomas W. Komola, manager of MIT's Security and Emergency Management Office.

The cameras' purpose, just as in February, is to monitor the security of an exhibit in Lobby 10, “Graduate Women of Excellence,” Komola said.

The exhibit runs through Thursday, and “Highlights of great moments in graduate women's history at MIT as well as the exciting work conducted by alumnae and current graduate women,” according to the exhibit's website, and is sponsored by the Office of the Dean for Graduate Education.

The security office maintains strict policies on the use of camera footage, Komola told *The Tech* in February. In the course of a criminal investigation, “The MIT Police Department is the sole entity that may request and use this information,” and “a written request must be signed and presented by the Chief of MIT Police.”

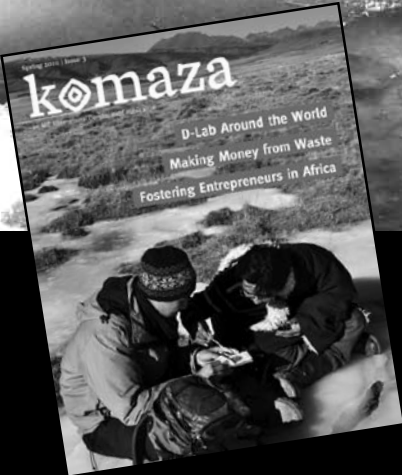
— John A. Hawkinson

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Metcalfe, co-inventor of Ethernet & MIT alum, hosts

\$100K, from Page 1

working with the Xerox Palo Alto Research Center in 1973. He received the National Medal of Technology in 2003 for his work on the invention. He currently works as an early-stage venture capitalist as a General Partner in Polaris Venture Partners, while dabbling in journalism on the side.

In addition to this work, Metcalfe remains highly involved with MIT and is a member of the MIT Corporation, EECS Visiting Committee, the MIT Energy Initiative External Advisory, the School of Science Dean’s Advisory Council, and the School of Engineering Dean’s Advisory Council.

Throughout the night, he asked team members hard questions about their ideas and reminded teams over and over again to network with other groups.

In a joking but earnest tone, at the end of the night, he shook each team member’s hand, saying “*Your team is going to win.*”

Seven teams remain as final-

ists in MIT’s \$100K competition an annual competition has run for 20 years and began this year during the fall with the October Elevator Pitch Contest. Each of the remaining finalist teams will receive \$20,000.

The final presentations and judging session will occur this Wednesday, and the first place \$100,000 cash prize winner will be announced at 7 p.m. in Kresge Auditorium.

Each of the remaining teams is a finalist in a specific subfield — development, life sciences, mobile, products and services, web/IT, or clean energy—but will compete with one another for the grand \$100K prize.

Overviews of the seven remaining team’s projects are presented below.

SolSource 3-in-1 (Development)

SolSource is engineering “a novel device that harnesses solar energy for portable cooking, heating and electricity generation” using only sustainable and locally avail-

able materials, according to the 100K Competition’s website. The team is comprised entirely of MIT students.

Team member Scot Frank G explained that their design is unique because it uses a distinct parabolic shape to reflect sunlight and produce energy, which is 1.4 meters in diameter when completely unfolded.

“This is something that we’ve already been working on for four years in Western China,” he said.

“We’ve been piloting in communities, and when we go and present it, test it, they don’t let us leave without telling us when they can buy one and where they can buy it,” Frank said.

The team says that it has gained the attention of numerous international institutions, saying “we’ve already been contacted by Sudan, South Africa, Peru, and other international governments,” Frank said.

Their device could save lives, he said.

Aukera Therapeutics (Life

Sciences)

As the life sciences finalist, Aukera Therapeutics is at the cutting edge of new treatments for the neurodegenerative disease amyotrophic lateral sclerosis — more commonly known as Lou Gehrig’s disease — by isolating a specific protein that may drastically slow symptoms of the disease when administered systemically.

“Researchers at Harvard Medical School and the Royal College of Surgeons in Ireland discovered that there’s a naturally occurring protein called Angiogenin that is central to neurogenesis,” said team member Meridith Unger, a Harvard Business School student. “The protein is abundant in healthy humans but is deficient in ALS patients,” she said.

“The systemic replacement of that protein has been shown to prolong survival, improve motor function, and has a neuro-protective effect as well,” she said.

“There’s only one FDA approved drug on the market that is only modestly effective, so our team and board are very excited to take this

protein into the clinic and see what it can do for human patients,” Unger said.

Lark Technologies (Mobile Tech)

Lark Technologies has developed “a silent waking system for busy professionals with different sleep schedules,” as described on the \$100K website.

The team designed a vibrating wristband for users to wear during the night, which, with the help of a free iPhone application, will activate at the desired wake-up time without waking other sleepers in the room.

Wake-up is guaranteed, according to Lark team members.

Team members suspect that the device will cost roughly \$60 when it premieres, but the iPhone application will be free.

According to the event website, the team says that the device will “provide compelling nonmedical solutions around optimizing

\$100K II, Page 17

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FLORENCE GALLEZ—THE TECH

A visitor at the “Through the Lens: Time” exhibition inspects “Organic” by Biyeun Buczyk ‘10 at the Media Lab on Wednesday. The show, an initiative of instructor Andrea Frank of the MIT Program in Art, Culture, and Technology of the Department of Architecture, ran through May 8. Buczyk is also a *Tech* photographer.

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\$100K finalists in home, offering good food & advice

\$100K II, from Page 16

sleep to make both people happier, healthier, smarter, and empowered to demonstrate their respect for each other.”

The product, they say, is named after the lark that sings in Shakespeare’s play *Romeo and Juliet*.

Insulin Chewing Gum (Products and Services)

Insulin Chewing Gum team member Manijeh Goldberg said that “as the name says, it’s a simple concept: we take insulin, put it inside nanoparticles, and then into chewing gum.”

Inspired to move the invention forward, she said, “A friend of mine, a Sloan Fellow, came back from her home in Nigeria, just in January. When I saw her, she had tears in her eyes, because she saw six people in her village die of diabetes. She was at six funerals during Christmas break.”

“What we’re trying to do is to replace [less effective, more complicated treatments] with a very simple concept: insulin chewing gum. Where you don’t need to open something and read complicated instructions,” said Goldberg.

According to Goldberg, insulin chewing gum is estimated to have a shelf-life of roughly 2 years unrefrigerated — far exceeding the shelf-life of systemic drugs, which requires refrigeration.

“[W]e believe our technology with the help of our advisors such as Dr. Langer is going to make this problem go away and revolutionize how this problem is treated,” she said.

KarDo (Web/IT)

KarDo has created development software which “reduces the cost of IT support” by “eliminating the wasted effort of repetitive tasks by allowing IT staff to easily produce configuration-independent automation,” the event website states.

“Companies today spend \$100 billion annually on the IT support alone for desktops alone,” said team member Hariharan Rahul G. “Today, we don’t have technology that can allow IT workers to automate a task across the variety of computer set-ups that we already have, for example, across different operating systems, or different applications even with the same operating system.” “KarDo has a technology that can basically look at an IT worker performing a task on one computer and automatically translate it into a set of actions and perform the same tasks on any computer, even a computer of a different set up,” he said.

“We built a prototype which has succeeded in hundreds of task-related combinations. Our basic predictions show that KarDo can reduce the cost of desktop support by at least 20 percent. That’s an annual saving of 20 billion dollars.”

C-Crete Technologies (Energy)

“Our idea is about concrete, the most widely used manufacturing material on the planet,” said finalist Rouzbeh Shahsavari G of the one of the two clean energy teams remaining in the competition.

By developing a “nanoengineered concrete” which not only reduces CO₂ emissions but is also much stronger than typical concrete,” the team is hoping to address both the problems of mitigating climate change and making construction materials more durable.

“On average, each person uses more than 3 tons of concrete per year. Unfortunately, concrete manufacturing and consumption accounts for 5 to 10 percent of carbon dioxide emissions worldwide,” he said. “Our design is unique because we have a way that very gently changed the nanostructure of the material. At the same time it reduces the cost of concrete manufacturing.”

OsComp Systems (Energy)

OsComp Systems, the second finalist in the clean energy category, is trying to promote the use of natural gas with energy-collecting technology.

“We came together last year and looked at a huge market need of the natural gas industry,” said one of the team members. “The revolution is built around a rotary compressor, using new materials and a new design,” that comes at only a fraction of the current cost of other compressors, the team member said.

“91 percent of wells today are marginal, and if we’re able to put a fraction of these wells on line with a cheaper compression solution, the gas price can be made much cheaper, potentially replacing the widespread usage of coal,” he said. “Natural gas is cleaner than coal,” he pointed out.



JARROD T. PHIPPS

Finalists in the \$100K Business Plan Contest networked at Bob Metcalfe’s ’68 home last Friday evening. The winners will be announced at the finale in Kresge on Wednesday.

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Bayern Munich faces Inter Milan in Euro league finals

A look at the other sport called “football”

By Yifan Cao

With the 2010 FIFA World Cup only a little over a month away, it seems like soccer is making its return into the consciousness of the American sports mind. But as large of a spectacle as the World Cup is, what the rest of the world calls “football” isn’t just something played every four years. In only two weeks, the most prestigious European soccer tournament will conclude with its final in Madrid. Last August, the UEFA Champions League began with the top teams from the top professional teams in Europe, and after many rounds of competition, only two teams remain standing in the knockout tournament: Bayern Munich and Inter Milan. They’ll face off Saturday, May 22nd in Madrid with the title of Champions of Europe on the line.

Bayern Munich, perennial title contenders of the German league Bundesliga, have enjoyed quite a decade of success in the Champions League, winning the competition in 2000 and making four other quarterfinal appearances in the last ten years. Still, they have not been a serious challenger for the title since 2005, with one quarterfinal loss being last year’s 12-1 aggregate defeat to FC Barcelona. This year, however, has been different for the German powerhouse. They’ve had close victories in beating a strong Fiorentina team and the English champions, Manchester United, before cruising over a stumbling Lyon team in the semifinals. French youngster Frank Ribery was supposed to supply the star power, but he’s actually been overshadowed by the sparkling play of Dutch winger Arjen Robben, who blasted a long ranged game-winner in the round of 16 against Fiorentina, and then netted with a perfect volley to win the quarterfinal against Man U.

Bayern’s opponents in the final will be Inter Milan, or Internazionale, who have won the Italian Serie A league title every year since 2005. However, they haven’t been able to replicate their league performance in Europe’s premier tournament; they last made it to the tournament’s quarterfinal round in 2006. Like their opponents, they were able to break the trend, and beat many very good clubs on their way to the finals, including the tournament favorite, FC Barcelona. Playing in the same city as AC Milan, they haven’t had their neighbors’ successes in Europe over the years, but are looking to earn their first European Championship since 1965.

The key match-ups in the final will be:

1. Frank Ribery’s suspension. The French winger has been a star for the German giants this season, and when he’s on his game, he and Robben will wreck havoc on any defense. However, Ribery’s red card for a nasty tackle in the first leg

of the semifinal has him suspended from the final, and Bayern are trying to get the suspension revoked. Will the tournament officials allow him to come back for the finals? If he comes back, that would be a huge boost for the offensive firepower of Bayern Munich.

2. Munich’s attacking midfield vs. Inter’s defensive midfield. Bayern has very serviceable strikers in Olic, Mueller, and Klose, but much more of their game depends on their midfielders winning possession and pushing the ball forward. If Schweinsteiger and Van Bommel are solid in the middle and Robben and Ribery or Altintop get the ball and make attacking runs, Bayern will be very tough to beat. Schweinsteiger and Van Bommel were great winning and controlling the ball in their last game against Lyon, which opened up chances for their attacking midfielders to do their thing. But in the final, they’ll be going against one of the nastiest defensive midfields in the entire world. Cambiasso, Zanetti, Chivu, and Sneijder were able to keep Barcelona’s attackers at bay for some length in two games, and those were the best in the world. Should they succeed in disrupting Munich’s passing rhythm and limit their involvement in the attack, that will leave less pressure for their defense and give both their fullbacks and midfielders more opportunities to join in the attack.

3. Unexpected Contributions. For Inter, it was the veteran Christian Chivu stepping up. Finding out less than an hour before kickoff that he had to be inserted into the lineup, he defended bravely against Barcelona, and helped hold off their incessant attack. For Bayern, it was the young fullback Contento who stepped up in both games against Lyon. Only nineteen years old, he held his own against the Lyon attackers, and had quality passes up into the attack. Will Chivu be ready to be called upon once again in the final if need be? Can Contento, who had barely featured in Munich’s Champions League campaign before the semifinals, overcome the pressure of his first Champions League final? One of these questions may determines the game on May 22nd.

Both teams have proven themselves on the way to the finals, and there’s little doubt they deserve to be in such a position. It will be the attacking prowess of the German side against the solid Italian defense in the end. Munich has not faced an opponent this year with as disruptive a defense as Inter, and Eto’o and Milito will be able to get forward for the Italian side on the counter. Though the stunning nature of Munich’s wins against Man U and Fiorentina have them believing this is a magical year, the Italians are too tough on defense, and will not allow the Munich attack to get into a rhythm. *Prediction: 2-1 Inter Milan.*

Track and Field teams race at New Englands

Men’s team finishes sixth overall, best in D-III; women take eighth

By Greg McKeever

DAPER STAFF

This weekend, the men’s and women’s track and field teams competed in the All-New England Championships.

A week after coming up just a few points short of Williams College at the New England Division III Championship, the No. 23 ranked MIT men’s track and field team exacted revenge. The Engineers finished sixth overall in the competition between Division I, II, and III teams, the best result for a Division III school.

Jeremiah R. “Yermie” Cohen ’09 had a tremendous performance in the 1500, finishing third overall and tops among Division III runners while setting a new MIT record. Cohen’s time of 3:48.40 is good enough to automatically qualify him for the NCAA Championship and stands alone atop Division III in 2010.

Paul D. Welle ’11 also finished strong in the 3000-meter Steeplechase, as the junior was the second overall finisher and improved his NCAA qualifying time, moving up to no. 7 in the country with a 9:12.22 mark.

The women’s team, ranked No. 7 in the country, finished eighth and

were the second best Division III finisher in the meet.

Tech had five new or improved NCAA qualifying marks at the meet, to go along with four personal records. Leading the way was Jamie L. Simmons ’12, who had an excellent showing in the 400-meter hurdles. Simmons finished in third place overall, tops among Division III runners, with her time of 1:02.39, the second best time in Division III on the year.

Portia M. Jones ’12 had a pair of strong performances at 200 and 400 meters. Jones won the 400 with a season-best time of 56.79. The provisional mark moves Jones up to 14th in the country. In the 200, Jones tied a personal record, finishing in 24.70 good for third place and first in Division III. Her time was just 0.13 seconds from the automatic qualifying standard and is the sixth fastest in the nation on the year.

Jones and Simmons teamed up with Martha M. Gross ’12 and Kirsten H. Aarsvold ’11 to run an excellent 4x400 race. The quartet placed second with NCAA automatic time of 3:48.62, smashing the Institute record by over three seconds.

MIT will travel to Springfield College next week to compete in the Eastern College Athletic Conference Championship on Thursday and Friday, May 13 and 14.

SCOREBOARD

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Saturday, May 7	
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Women’s Track and Field	
Saturday, May 7	
NEICAAA Championship	8th of 39



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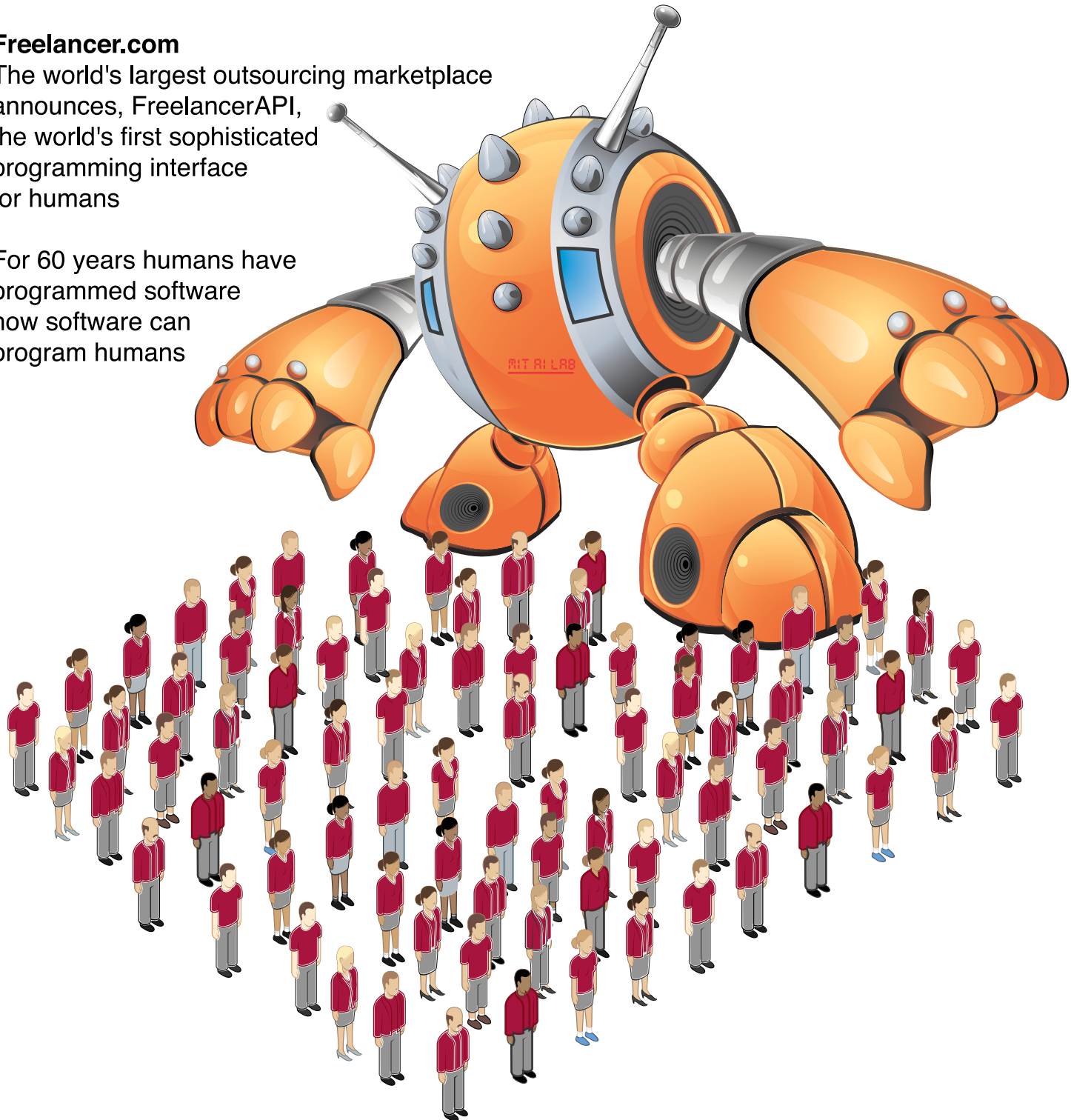
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